

The GIS Services Section, whose main role is to provide the department with maps and data to support the mission and strategic direction of ITD, is one of four sections within the Division of Transportation Planning. We provide services relating to the production of standard and custom data to support map making and map analysis for a wide variety of clients throughout the department. The GIS section is responsible for maintaining the department's official linear referencing system, the Milepoint And Coded Segment (MACS) system. This section is also responsible for annually verifying and compiling information for the Director regarding improved local road mileage as required by Idaho Code Section 40-132 and 40-709.

Initially, highway programming at ITD was the primary customer for maps and spatial data from the GIS Section. The staff estimates that 90% of all customers and users are within the department. The remaining 10% are GIS users from federal, state, tribal, local offices and the private sector who need access to our spatial and tabular data sets. The GIS Section assists ITD district office staff, local road jurisdictions, metropolitan planning organizations, and Idaho State Police with their GIS development. Spatial data with metadata and prepared maps are available for download on the Intranet. For external requests, we transfer the data utilizing FTP tools on the state's FTP server. Maps for political and legislative functions, as well as for managers and staff at ITD are also produced. We plan to serve our data through INSIDE Idaho later this year.

Customers of the MACS system include federal and state agencies as well as sections throughout the department who store and need access to linear referenced data. Data access is provided through the production of milepost logs which are available on the Intranet/Internet or on-the-fly through an interactive report generator. They also provide assistance on an "as-needed" basis based on written or oral requests.

Annual reporting maps and documents regarding improved roads and road surfaces in local jurisdictions are available on the Intranet or by request and are sent out in digital format on CDs or as large-format plots.

ITD is participating with the Idaho Geospatial Committee, a subcommittee of ITRMC, in efforts to coordinate GIS activities among state agencies. ITD also participates in the Idaho Geospatial Users Group and in several multidisciplinary, inter-agency groups to promote sharing of GIS expertise and resources.

Last fiscal year, we received a grant from the U.S. Geological Survey to conduct a study of the potential benefits of integrating multiple road centerline data sets for one jurisdiction. We used the funding to hire a graduate student at ISU to compare and conflate several road centerline datasets available for Bannock County. The final report from this project is under review now. We are also working with the U.S. Forest Service to provide data to support the Primary Base Series map project.

Currently, the GIS Section website is stored on a development server until space can be made available on the Department's production server. The web site provides access

to GIS (with federally-compliant metadata) and CADD data sets used in the GIS Section for mapping and analysis. The site contains copies of the most requested map products as well as access to over 9,000 maps and documents that record the annual reporting process for local road jurisdictions. The site also provides access to documents which detail standards for the collection and sharing of GIS and GPS data as well as quick access to data conversion and viewing software plug-ins.

The GIS Section has experimented with online interactive mapping. There are several web-map sites on a department server that were developed on request from ITD section managers who wanted a map interface for their tabular data. These sample interactive mapping sites include bridge inventory with photographs, annual maintenance costs by foreman area, and links to current and proposed locations and costs for ITS equipment across the state by district. These sites are located on ITD's Intranet.

The section staff are working with the Office of Public Affairs to develop a pilot project for an interactive Internet-based traveler information site. Due to the current configurations of the ITD firewall, this site is hosted by an external consulting firm for a monthly license fee. The site is on the Internet and is in beta-test mode at <http://imf.geocortex.net/mapping/itd/launch.html>.

### **Examples of some of the current projects underway at ITD**

Base map enhancement – divided highways, congestion data, traffic survey stations and HPMS data

Local Road Program – includes county maps and annual reporting data

Urban and Rural 2010 Functional Class

Evaluate digital submission of local governments' line work for local road program

Evaluate MapMerge conflation software

Participate in T2 TAMS asset management project

MACS – migrate to RDBMS

Standards for aerial imagery that support CADD and GIS

Highway safety – support work with ISP

DMV – permitting and routing application – then web-enable it

DMV – incorporate maps/GIS into the registration/license process

Participate in the development of TTWG standards for data sharing

Spaghetti line work-ISU/USGS project in Bannock County

Sign inventory data dictionary and procedures for GPS collection

Use of hand-held units for field data collection

SH 55 – Payette Scenic byway virtual tour with Visual Genesis